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on the back of the neck. These fibres are either not present or not functional in all the cats examined.

The pilo-motor fibres from the seventh thoracic to the third lumbar nerves, supply a strip of skin about twelve cm. wide, extending down the middle of the back from the upper part of the thoracic region to a point some six cm. out on the tail.

The plan of innervation in this region is very interesting. It can be shown that stimulation of any spinal nerve root in this group causes horripilation along a strip of skin some ten cm. in length. Taking any two successive nerves the more caudal one innervates a strip of skin the beginning and end of which are about two cm. caudal of the strip innervated by the more cephalic nerve.

1. BECK, *Die Bestimmung der Localisation der Gehirn-und Rückenmarksfunctionen vermittelst der elektrischen Erscheinungen*, Centralbl. f. Physiol. 1890 IV 473.

2. FLEISCHL v. MARXOW, *Mittheilung, betreffend die Physiologie der Hirnrinde*, Ibid. 1890 IV 537.

3. BECK, *Die Ströme der Nervencentren*, Ibid. 1890 IV 572.

4. GOTCH AND HORSLEY, *Ueber den Gebrauch der Elektrizität für die Localisation der Erregungserscheinungen im Centralnervensystem*, Ibid. 1891 IV 649.

5. DANILEWSKY, *Zur Frage über die elektromotorischen Vorgänge im Gehirn als Ausdruck seines Thätigkeitszustandes*, Ibid. 1891 V 1.

The above mentioned papers are experimental, polemical and historical. They have grown out of the question, how far the activity of the central nervous system is accompanied by demonstrable electrical changes, and to what degree these changes can be used for the study of localization of function in it. Gotch and Horsley stimulated the cerebral cortex and noted the electrical changes in certain tracts of the spinal cord.

The others have for the most part applied a peripheral stimulus and noted the electromotive changes in the brain, mainly in the cortex. From the results of all, it would appear that the cortex is usually active to such an extent that there are continuous and irregular electrical changes, which can not be accounted for by distinct peripheral stimuli. Peripheral stimuli produce more or less marked changes in the resting current taken from the cortex and there seems to be some relation between the disturbance in the several sensory cortical centres and stimulation applied to their appropriate sense organs, but it is far from precise or satisfactory. On the power of anæsthetics (chloroform and ether) to prevent these electromotive changes, the authors are not in accord, Beck claiming that the spontaneous activity of the cortex continues under choloform, while v. Marxow claims that the cortex is paralyzed by anæsthetics.

All those who have employed the "negative variation" as an instrument wherewith to attack physiological problems are aware that it is a hard one to handle, and whether it can be used to add to knowledge of the functions of the cerebral cortex remains yet to be shown.

STEWART, *Notes on some applications in physiology of the "resistance" method of measuring temperature, with special reference to the question of heat production in mammalian nerves during excitation*, Journal of Physiology, 1891, XII 409.

The apparatus used registered changes in temperature by the swing of a galvanometer needle and in most experiments variations of 0.0005° C. could have been detected with certainty. Neither in frogs nor dogs and rabbits is there evidence of a variation of the above mentioned amount